Research on the Design Principle and Weight Determination Method of Performance Evaluation Index of Enterprise Group under Strategic Guidance

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Abstract. An important part of enterprise group management under strategic guidance is to establish the performance evaluation system of parent company to subsidiaries or business units in order to provide support and control information for strategic management. Based on the requirements of the strategic performance evaluation of the enterprise group, this paper discusses the principles and methods of the design of the performance index of the enterprise group and the determination of the index weight, which provides the thinking and guidance for the effective performance management of the enterprise group.

Introduction

With the world economic integration, the internationalization of the stage of competition, China began to emerge more and more large enterprises, these enterprises experienced from the single enterprise to the enterprise group after the expansion, with the increase in management, The original single enterprise management model can no longer meet the needs of its effective control, therefore, the focus of the parent company began to focus on how to effectively monitor and encourage the group to achieve efficient operation and efficient management to obtain long-term development of. It is an important part of group management to study how to establish the performance evaluation system of parent company to subsidiaries or business units in order to provide support and control information for strategic management.

Principles of Performance Evaluation of Enterprise Group Performance under Strategic Guidance

Source of Performance Evaluation Indicators

Design performance indicators, must be based on the strategic objectives of enterprise groups, through decomposition and balance, step by step delivery, and finally the formation of departmental and individual performance goals, to ensure that departments and individuals towards the organization's overall strategy to achieve the direction of development. When setting goals, consider two aspects: one is the consistency of personal goals with departmental and organizational goals; the second is obstacles and resources, that is, to achieve the target may encounter obstacles, such as budget constraints, lack of time, lack of personnel, Rapidly changing customer requirements, etc., as well as the resources required to mobilize, such as information, time, personnel, technical support and so on.
Design Criteria for Performance Evaluation Indicators

In the selection and design of evaluation indicators, to follow the SMART principle: (1) specific, that is, performance indicators to cut specific work objectives, indicators must have a clear definition and calculation methods; that is clear what to achieve what results; (2) Can be measured, that is, quantitative or quantitative, or behavioral, to verify the performance of these indicators of data or information is available; if too abstract and cannot be measured, you cannot control the target. (3) achievable, the performance objectives are within the control of the department or individual, and can be achieved through efforts so that the goal can be effectively and effectively motivated; (4) the objectives are highly relevant to the organizational and sectoral objectives, (5) the goal is time-based, must set the time to complete these goals.

The Method of Designing the Performance Evaluation Index of Enterprise Group under Strategic Guidance

There are many ways to design performance indicators, such as target management, key performance indicators, balanced scorecard method, but these three methods have their advantages and disadvantages. In general, the first use of balanced scorecard, from the financial, customer, internal business processes and learning and growth between the causal relationship between the decomposition of organizational strategies, the formation of organizational performance goals. According to the strategy to determine the financial objectives of the organization, and then from the causal relationship, to determine the financial objectives corresponding to the other three levels of goals, together form the organizational performance goals. These goals and measures are divided into four aspects: customer, finance, internal business process, learning and growth.

In Terms of Finance

Showing whether the corporate strategy and its implementation and implementation are contributing to the improvement of the results of the final operation. Common indicators include: asset-liability ratio, current ratio, quick ratio, accounts receivable turnover, inventory turnover, capital profit margins, sales profits and taxes.

On the Customer Side

According to the customer's concern is divided into four categories: time, quality, performance and service, cost, set goals, and then these goals into specific measurement indicators. According to the excellent customer performance from the organization in the procedures, decisions and behavior, in the internal business process, the evaluation index is from the customer satisfaction has the greatest impact on the business process indicators, including the impact of cycle, quality, employee skills And the various factors of productivity, as well as the key technologies needed to ensure a lasting market leadership.

In Terms of Learning and Growth

This confirms the need to create long-term growth and improve the infrastructure that must be built. Organizational learning and growth have three main sources: talent, system and organizational procedures. By revealing the gap between the existing capabilities of talent, systems and procedures and the capabilities necessary to achieve breakthrough performance. In order to compensate for these gaps, companies must invest in order to enable employees to acquire new skills, strengthen information technology and systems, and straighten out the organization's procedures and daily work. The use of balanced scorecard to performance management with the strategy linked to the following three principles should be followed: (1) to establish a causal relationship. A set of strategies is a set of assumptions about the causal relationship, causality can also be expressed with
a series of assumptions. An appropriate Balanced Scorecard will showcase the organization's strategy through a series of causal relationships, and the performance management system will articulate causal relationships in all aspects in order to manage these causal relationships. Each of the means of assessment in the Balanced Scorecard should be part of this series of causal relationships and link the strategy of the department to the overall strategy of the organization; (2) the driving force for clear performance. A good balance scorecard contains means of assessment of production and a means of encouraging good work attitude. The measure of yield, if linked to different job performance, does not reflect how the output is achieved, nor is it sufficient to reflect as soon as possible whether the organization's strategy is successful. An excellent balance scorecard should drive production and performance Factors are organically integrated and incorporated into organizational strategies; (3) linked to financial indicators. Balanced scoring card must emphasize the results of the operation, in particular, should be linked with the financial objectives, such as capital returns and product value added. Many managers often fail to link programs (such as overall quality control, cut production cycles, and employee empowerment) to business results, which often have a direct impact on customers and are related to the organization's future financial situation The In these organizations, plans to improve job performance are often mistakenly regarded as the ultimate goal, these plans are not linked to improving the customer structure and the final organization's financial situation, it is difficult to avoid the result of these organizations cannot get a specific plan to return the reform, So the measures in the Balanced Scorecard system must be linked to financial goals.

The Method of Measuring the Weight of the Performance Evaluation Index of Enterprise Group under the Strategic Guidance

Analytic Hierarchy Process AHP method, is the United States Professor Seti in the 1970s put forward a qualitative and quantitative analysis of the combination of multi-criteria sorting method. The main idea of AHP is that in the face of complex system, according to the specific situation of the object, the principles and standards involved, clarify the relationship, establish the multi-level hierarchical structure; in the local structure, the upper layer as a standard, According to the judgment matrix, the maximum eigenvalue and the eigenvector are calculated to form the order of local importance degree. Finally, the method of determining the maximum eigenvalue and the eigenvector is used to establish the judgment matrix. According to the multi-level hierarchical hierarchy model, the scores of the subjects are calculated and sorted. AHP is theoretically relatively mature and widely used, it is simple, easy and feasible. It is an effective method to quantify the non-quantitative factors. It is especially suitable for multi-factor, complex structure and lack of necessary data. System analysis.

Determination of the Weight of Strategic Performance Evaluation of Enterprise Group under Strategic Guidance

Strategic Performance Evaluation System Group on the role of business performance of each index is different, determine the index weight is an important step in its evaluation, it reflects the importance of the indicators in the whole system. The accuracy of the index weight affects the scientific and correctness of the evaluation results to a large extent, and the steps to determine the weight:

Analyze the Relationship between the Elements in the System and Establish the Hierarchical Structure of the System

Using the Analytic Hierarchy Process (AHP) to analyze the Group's strategic performance problem, it is necessary to classify the Group's strategic performance problem, decompose it into different

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constituent factors, and group the subordinate relationship among the factors to form a disjoint level. The upper level of the elements of the next level of the next or all of the elements play a dominant role in the formation of a top-down layer-by-layer relationship, that is, the Group's strategic performance research hierarchical model. This model is to start from the overall goal of group performance evaluation, through a number of economically middle layers, to the lowest level, the lowest level is reflected in the Group's strategic performance in all aspects of specific indicators.

**Compare the Elements of the Same Hierarchy to the Importance of a Criterion for the Previous Hierarchy, Construct a two-two Comparison Judgment Matrix**

In order to compare the relative importance of the influence of a middle index on a certain index, this paper compares the two indicators with a certain number of expert surveys to judge the relative importance. At the same time, through these judgments, Scale, see the table, the numerical quantitative, to determine the matrix. And then through the expert questionnaire, based on the comprehensive expert opinion, construct the judgment matrix as shown in Table 1.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>indicates that the two indicators are of equal importance</td>
</tr>
<tr>
<td>3</td>
<td>indicates that the two indicators are compared to one indicator is slightly more important than the other</td>
</tr>
<tr>
<td>5</td>
<td>indicates that the two indicators are compared to one indicator is more important than the other</td>
</tr>
<tr>
<td>7</td>
<td>indicates that one indicator is more important than the other</td>
</tr>
<tr>
<td>9</td>
<td>indicates that one indicator is more important than the other</td>
</tr>
<tr>
<td>2 4 6 8</td>
<td>the median of the adjacent judgment</td>
</tr>
</tbody>
</table>

**Calculate the Relative Weight of the Comparison Element for the Criterion Based on the Judgment Matrix**

Firstly, the maximum eigenvalue of the judgment matrix is obtained, and then the eigenvector corresponding to the largest eigenvalue is obtained. Finally, the obtained eigenvector is normalized. This vector is the relative importance of each index to the upper index Weight vector.

**Consistency Check**

When comparing multiple factors, it is often difficult to ensure consistency and consistency. To keep this degree of disagreement within an allowable range, a consistency test is required with the following steps: First calculate the maximum eigenvalue of the judgment matrix, and then calculate the consistency index $CI = (\lambda - N) / (N-1)$, Where N is the order of the pairwise comparison matrices, and finally the consistency index $CR = CI / RI$ is calculated, where M is the random consistency index and its numerical size is shown in Table2.

<table>
<thead>
<tr>
<th>Matrix order</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>RI value</td>
<td>0</td>
<td>0</td>
<td>0.58</td>
<td>0.90</td>
<td>1.12</td>
<td>1.24</td>
<td>1.32</td>
<td>1.41</td>
<td>1.45</td>
<td>1.49</td>
</tr>
</tbody>
</table>

When $CR < 0.10$, it is assumed that the inconsistency of the pairwise comparison matrix is within the allowable range, then the weight vector is valid, otherwise it is necessary to adjust the judgment matrix.
Calculate the Synthetic Weights of the Elements at Each Level

According to the hierarchical structure of the system, the synthetic weights of each layer factor to the system target are calculated by the step-by-step method. The lowest synthetic weight is the weighting result of the evaluation index.

Conclusion

With the increase in management, the focus of corporate groups began to shift to effective monitoring and incentives to achieve efficient operation and efficient management within the Group to achieve long-term development. The design of the performance evaluation index of the enterprise group under the strategic guidance must be based on the strategic objectives of the enterprise group, through decomposition and balance, step by step, and finally form the performance goals of departments and individuals to ensure that the departments and individuals to achieve the overall strategy of the organization Direction. In the selection and design of evaluation indicators, to follow the specific, measurable, achievable, relevance and other principles. Strategic Performance Evaluation System Group on the role of business performance of each index is different, determine the index weight is an important step in its evaluation, it reflects the importance of the indicators in the whole system. The hierarchical analysis method can be used to determine the weight of the performance evaluation index of the enterprise group under the strategic guidance.

References
